AN

HISTORICAL ACCOUNT

OF A

NEW METHOD

OF TREATING THE

SCURVY at SEA:

CONTAINING

TEN CASES,

Which ſhew that this deſtructive DISEASE, may be eaſily and effectually CURED, without the Aid of freſh Vegetable Diet.

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AN HISTORICAL ACCOUNT OF A NEW METHOD OF TREATING THE SCURVY at SEA, &c.

IT was an Obſervation of the celebrated Dr. *Mead* †, that it is not ſo eaſy a Thing to ſerve the Publick as is commonly imagined; but, ſaid he, they who are acquainted with the ſeveral Motives which influence the Actions of Men, and conſider that Self-intereſt, Envy, Pride, and Obſtinacy, bear no inconſiderable Share, will readily ſee the Springs of that ſeemingly unaccountable Diſpoſition of Mind, which prompts People to deſpiſe, neglect,

† In his Preface to the Account of Mr. *Sutton*'s Contrivance for extracting foul Air from Ships.

or even oppoſe the putting in Practice uſeful Experiments.

As a Confirmation of the Juſtneſs of this Charge, I may fairly be allowed to allege the ſmall Degree of Attention, that, in the Courſe of more than five Years, I have been able to procure to my Propoſal for trying *freſh Wort*, or *Infuſion* of *Malt*, as a Subſtitute for the Juices of freſh Vegetables, in the Cure of the Scurvy *at Sea*.

For as *Wort* is a Liquor perfectly ſimilar, in all its Qualities, to the recent Juices of the ſweet Vegetables, which are known, from repeated Experience, moſt certainly to cure the Scurvy ; I naturally inferred, that if taken like them in a Quantity ſufficient, it would, in all human Probability, produce the ſame ſalutary Effects.

Now as *Malt*, if well dried, and carefully kept in a proper Part of the Ship, may be preſerved ſound for a great Length of Time, I propoſed that it ſhould be carried to Sea, in Order to be brewed into *Wort* as often as it might chance to be wanted,

and

and thus prove a Remedy always in readineſs againſt a moſt fatal Diſeaſe.

This Propoſal was originally ſent in the Spring of the Year 1762, to Sir *John Pringle*, Dr. *Hunter*, and *Henry Tom*, Eſq; then one of the Commiſſioners for taking care of ſick and wounded Seamen: Theſe Gentlemen were ſo far perſuaded of the Reaſonableneſs of the Scheme, and the Probability of its Succeſs, that in conſequence of their Application, an Order was obtained, from the Board of Admiralty, to have the *Wort* tried in the Naval Hoſpitals, at *Portſmouth*, and at *Plymouth*.

But as it was neceſſary, in order to determine the genuine Effects of the Remedy propoſed, that the Patients ſhould, during the Time of the Trial, be entirely debarred from the Uſe of every Sort of freſh Vegetable, this Reſtriction was deemed ſo ſevere, and looked ſo like retarding Men's Cures for the ſake of Experiment, that it occaſioned a general Murmur and Diſguſt, and of courſe, put a Stop to the further Proſecution of the Scheme at the Hoſpitals: Nay the Patients made ſuch a Variety of grievous

 Complaints,

Complaints, as to impoſe on the Gentlemen who had the Superintendency of the Sick at thoſe Places, and make them believe that the *Wort* produced very bad Effects.

The Admiralty, nevertheleſs, iſſued a ſecond Order, to have *Malt* carried to Sea, and the *Wort* tried on Ship-board, where no Temptations of freſh Vegetables could offer to make the Men uneaſy, and where it was expected the Patients would chearfully ſubmit.

But as no Report of either the good or bad Effects of the *Wort*, was ever returned to the Office, in conſequence of this Order, I take for granted that no Attention was paid to it; which may be eaſily accounted for, from that Averſion to Innovation and Experiment which is ſo prevalent among the Bulk of Mankind, and eſpecially among Seamen.

Beſide theſe publick Attempts to have a Trial of the *Wort*, I alſo made ſome private Applications to ſuch Navy Surgeons as I thought I could influence, but never could

get

get any thing done. Indeed the Peace, which took place ſoon after, left few or no Opportunities, in the Navy at leaſt, of having the Experiment made, as the Ships, after that Period, were ſeldom under the neceſſity of remaining ſo long at Sea as to become obnoxious to the Scurvy.

A Courſe of Experiments, in which I engaged about this Time, confirmed me ſtill more and more, in the Opinion that *Wort* would actually cure the Scurvy; accordingly, I drew up all the various Reaſons that occurred in favour of this Perſuaſion, and formed them into an Eſſay, which was publiſhed together with four others, on Medical and Philoſophical Subjects, in *May* 1764, under the Title of *Experimental Eſſays*.

As this Book contains all the Theoretical Reaſoning concerning theſe Matters, I purpoſely omit ſaying any thing on that head, but refer ſuch Readers as may wiſh to be informed, to the Eſſay above-mentioned;—the preſent Publication being intended, not only as a Supplement, but alſo for the Uſe of

of Perſons, not of the Medical profeſſion, and who may occaſionally chance to ſtand in need, or wiſh to promote the Uſe of the Remedy propoſed.

Though it be ſo long ſince the Propoſal was made publick, yet it is only the other Day that I have heard of any Attention having been paid to it, by thoſe who had the Power of making the neceſſary Trials: At length however I have the Satisfaction of receiving two Accounts, which are ſo very intereſting to the Welfare of a very valuable Set of Men, that I look on it as a Duty to make them publick without Delay, in order that a Diſeaſe, hitherto ſo deſtructive, may no longer be ſuffered to carry off ſuch Numbers, when it may eaſily be guarded againſt by a Remedy ſo ſimple and innocent.

The firſt Account I received was from the Captain of his Majeſty's Ship *Jaſon*; for this Ship having been ordered to *South America* in *October* 1765, her Commander promiſed me that the *Wort* ſhould certainly be tried if any Opportunity offered during the Courſe of the Voyage.

She returned to *England* in the latter end of *March* laſt, when the Captain wrote me that a Trial had been made, and that the *Wort* had ſucceeded beyond Expectation; at the ſame Time, telling that the Surgeon would immediately furniſh me with a particular Detail.

Soon after, I received the Surgeon's Letter dated 9th *April* 1767, together with his Journal containing his Practice during the whole Voyage.

Theſe Papers arrived juſt in Time for me to extract the Caſes wherein the *Wort* had been given, and add them, by way of Poſtſcript, to the ſecond Edition of the Book formerly mentioned.

But as the Journal contains a general Account of the State of Weather and Diſeaſes, in a Part of the World hitherto undeſcribed, I apprehend it muſt prove acceptable to many Readers, and therefore give it here entire.

A ME-

A

MEDICAL JOURNAL

KEPT BY

Mr. *ALEXANDER YOUNG*,

Surgeon of his Majesty's Ship Jason, *Captain* John Macbride *Commander, from the* 30*th Day of* September 1765, *to the* 20*th of* March 1767.

'On the 30th *September* we sailed from '*Long-reach*; from that Time, to the 25th '*October*, there were no Complaints of such 'Consequence as to merit a Place in this 'Journal.

'*October* 25th—We left *England*, and 'being happy in meeting with very favour-'able Winds, arrived at *Madeira* in eight 'Days.—Our first Complaints on coming 'into warm Weather were of the inflam-'matory Kind, but slight, and yielding easily 'to the common Methods of Treatment.—

'The

'The Mercury, in this Run, roſe in *Fah-*
'*renheit*'s Thermometer from 40 to 72.

'From *November* 5th to the 22d—(the
'Day when we reached the Iſland of *St.*
'*Jago)* the Inflammatory Complaints ſtill
'continued to be the only ones, and none
'of them fatal. The Mercury, from 72
'to 80.

'From the 22d *November* to the 5th
'*December* (the day we croſſed the Equator,
'the Mercury riſing from 80, to 84) many
'were ſeized with Fluxes, attended with
'violent griping and great Sickneſs. As
'theſe Diſorders were ſuppoſed to proceed
'from the *St. Jago* Water, ſome *Elixir* of
'*Vitriol* was put into the Scuttle-butts every
'Morning; which ſeemed to produce a very
'good Effect, for the Day we croſſed the
'Line there was only one Man down with
'the Flux. Every other Precaution was
'alſo made uſe of in order to keep the Peo-
'ple healthy; the Ship's Timbers being
'new, Fires were made between Decks,
'and ſhe was frequently ſmoaked with Tar
and Brimſtone; the Men's Cheſts were

'examined every Week, and they were 'obliged always to keep themſelves clean 'under penalty of having their Allowance 'of Spirits ſtopt.

'The Cure of theſe Fluxes was accom-'pliſhed by bleeding, in the firſt Place, an 'Emetic in the Evening, and a Doſe of 'Rhubarb with a few Grains of Nut-'meg the enſuing Morning: When the 'Symptoms did not yield to theſe Means, I 'had recourſe to the Ipecacuan in ſmall 'Doſes, of four or five Grains, repeated 'for three or four Times at the Interval of 'four Hours.

'From *December* 5th to the 18th—Fair 'Weather and little Sickneſs; the Mercu-'ry continued about 79—but this Night, 'it fell all at once to 69, the Wind chang-'ing to the Southward.

'From *December* 18th to *January* 8th, '1766, the Day on which we arrived at '*Port Egmont* (in the *Falkland Iſlands*, off 'the Coaſt of *Patagonia*, in the Latitude of '52 South) we had a good deal of ſtormy

'cold Weather with Hail, and the Mercu-
'ry gradually fell from 69 to 59: We
'were, nevertheleſs, pretty healthy, the
'People being in general very well cloathed.
'—What Diſeaſes we had, were Fevers of
'the Inflammatory Kind, Pleuriſies, Rheu-
'matiſms, and Coughs; all of which yield-
'ed to plentiful bleeding, cooling Purges,
'and nitroſe Medicines;—ſo that hitherto
'we did not loſe a Man.

'There were alſo ſome Appearances of
'the Scurvy, ſuch as painful and bleeding
'Gums, loſs of the healthy Complexion,
'and Laſſitude—particularly in one *Willi-*
'*am Curtis*, a Joiner by Trade.

'The Captain having ſome Time ago
'made me a Preſent of a Book written by
'his Brother, wherein it is ſtrongly recom-
'mended to try *Wort* in the Cure of the
'Scurvy, and being provided with a Store
'of good *Malt*, I was determined to make
'uſe of it the firſt Opportunity.

'This *Curtis* was about 24 Years of
'Age, a poor ſickly Creature at beſt;——

'he complained of Laſſitude, rotten Gums,
'ſtinking Breath, and was generally much
'bound up in his Belly; he was of a pale-
'iſh green Colour, the Pulſe weak, his
'Fleſh waſted away, and ſo feeble that he
'could ſcarcely walk.

'I put him on a Courſe of the *Wort*,
'and made him drink a Pint of it every
'Morning; this Courſe was continued for
'about a Month, and agreed ſo well with
'him, that by the Time we arrived at
'*Port Egmont* he was tolerably recovered.
'——It is to be obſerved however, that
'the Captain having ſome Apples and
'Lemons on Board, the ſick Man had eve-
'ry Day four Apples, and two Lemons ſo
'long as they laſted.

'From *January* 8th to *February* 5th,
'Stormy Weather but clear.——In this
'Time we made a Circuit round the
'Iſlands, and finding great Plenty of Wild-
'fowl, ſuch as Geeſe, Ducks, and Snipes,
'and Abundance of *Wild Celery*, and *Sorrel*,

'our

‘ our People lived well and were perfectly
‘ healthy. The Mercury from 59 to 53.

‘ From *February* 5th to *April* 6th—We
‘ had high Winds, with *Snow* and *Hail*;
‘ but continued healthy.——We caught
‘ Plenty of Mullet from one to ten Pounds
‘ Weight, and our People lived upon them
‘ and the Geeſe.——The Mercury in the
‘ Thermometer from 53 to 46.

‘ From *April* 6th to *June* 1ſt.—We had
‘ much *Rain* and *Snow*, with two or three
‘ ſtrong Gales of Wind.——Thermometer
‘ from 46 to 39. The Mullet left us in
‘ *May*, when their Place was ſupplied by
‘ Smelts of a very large Size; but of theſe
‘ we could ſeldom get enough to ſerve the
‘ Ship's Company:——The Geeſe too were
‘ not to be had, at this Time, without
‘ much more Trouble than at firſt; being
‘ under the Neceſſity of ſending for them
‘ once a Week to *Keppel*'s Iſland; they
‘ were made into Broth, with Rice and
‘ Celery, and the Men ſerved twice a Week,

‘ with

' with each a Quarter of a Gooſe for his
' Share.

' During this Period we had ſome few
' Intermittents, which yielded readily to the
' Bark, after having premiſed Vomiting,
' and the Uſe of the Saline Mixture: In
' thoſe Subjects who were of a robuſt Ha-
' bit, I ſometimes had occaſion to bleed—
' and it was obſervable in general, that af-
' ter they had got rid of the Fever they
' were a long while before they recovered
' their Strength, their Legs often ſwelled,
' their Gums grew ſpungy, and they ap-
' peared greatly diſpoſed to the Scurvy——
' to prevent which it was a Practice to con-
' tinue the Uſe of the Bark and Elixir of
' Vitriol for a conſiderable Time after all
' Signs of the Fever had diſappeared; and
' the Invalids were moreover obliged to be-
' ſtir themſelves, and exerciſe briſkly.

' From *June* 1ſt to *Auguſt* the 1ſt, The
' Mercury was from 39 to 36, the Weather
' foggy, with Froſt, and Snow at times,
' but much leſs than was expected, with
' little Wind.

' In

'In this Period happened the only Death 'we had hitherto experienced, among the 'whole Crew, conſiſting of One hundred 'and Eighty.

'*June* 10th, Mr. *Thomas Harmood*, one 'of the Maſter's Mates, was ſeized with a 'Fever which turned out highly putrid: '—It ran on for fifteen Days; however he 'ſtruggled through, but immediately after-'wards fell into the Scurvy.——At firſt I 'put him upon taking an Infuſion of the 'Bark in Madeira Wine, together with 'Elixir of Vitriol, but could not prevail on 'him to continue this Courſe.——

'Finding him daily loſe Ground, I called 'in Mr. *Meek*, Surgeon of the *Carcaſs*, on 'the 13th *July*——at which time, he uſed 'to bleed often at the Noſe, and alſo 'paſſed Blood by Stool, his Gums were 'quite rotten, his Breath intolerable—— 'and his Legs all covered over with purple 'Spots of different Sizes.

'We agreed to try him with the *Wort*, 'but he took only half a Pint of it; for

'this

'this having given him a Stool, which he 'much wanted, he would take no more, 'either of that, or of any thing elſe in 'the way of Medicine that could be got for 'him——the Conſequence of which was 'that on the 20th he died in a miſerable 'Condition.

'From the 1ſt *Auguſt* to the 1ſt *Septem-* 'ber, it was moſtly fine Weather for the 'Seaſon, clear and froſty. The Mercury from '36 to 33.——Several had ſore Gums, and 'a good many drank the *Wort* by way of 'Preſervative.

'During this Time many were ſuddenly 'ſeized with fainting Fits accompanied with 'violent Pain in the Stomach, and great 'Difficulty of breathing. As theſe Com- 'plaints were evidently cauſed by eating too 'much Wild-fowl, and uſing too little Ex- 'erciſe, the Seamen humorouſly termed 'this Diſeaſe the *Alderman*: None however 'were carried off by it; immediate bleed- 'ing, an Emetic, and an Anodyne Draught 'afterwards with Plenty of warm Drink

'to

' to encourage ſweating, carried off the
' Complaints uſually in the ſpace of two
' Days.

' From *September* 1ſt to *October* 1ſt——
' The Weather was ſtormy but moſtly
' clear:——the Mercury from 34 to 40.—
' In this time we went over to the Coaſt of
' *Patagonia*, and endeavoured to get into
' the Straits of *Magellan*, but were blown
' off; the People all the while remarkably
' healthy.

' From the 1ſt *October* to the 1ſt *Novem-*
' *ber*, moſt Part, freſh Gales and clear Wea-
' ther; the People all very healthy. The
' Fowls began to lay the Beginning of this
' Month, in ſuch Abundance that from *five*
' to *fifteen* hundred Eggs were collected eve-
' ry Day, large, and very good to eat.——
' The Mercury in the Thermometer from
' 40 to 49.

' From *November* 1ſt to *December* 1ſt,
' freſh Gales, and moſtly clear;——all
' healthy——but we loſt one of our petty
' Officers, Mr. *Coulſon*, who was carried off,

'as it ſhould ſeem, by the Stroke of an Apo-
'plexy :——he had gone about ſix Miles,
'acroſs the Hills, to a Place called *Expe-*
'*riment Sound*, in order to catch Fiſh ;——
'and was found the Day following, dead,
'lying with his Head down the Hill, and
'black in the Face as if he had been
'ſtrangled.

'From *December* 1ſt to *January* 16th,
'1767.——We had ſtrong Gales and
'ſqually Weather with Hail and Snow :---
'The Mercury from 49 to 56 : The Peo-
'ple ſtill continued to enjoy good Health,
'in general, there being no Complaints but
'what were trifling, nor no Death, but
'that of the Maſter at Arms, who died ſud-
'denly, in conſequence of exceſſive drink-
'ing.

'We now ſet ſail on our return to *Eng-*
'*land*, and from *Port Egmont* to the Lati-
'tude of 39 South, had freſh Gales, and
'more or leſs Rain every Day, the Mer-
'cury riſing gradually from 56 to 72.---
'From Latitude 39 to 23, we had
'Calms and conſtant heavy Rain.——From

'23, to the Iſland of *Fernando de Norona*,
'in the Latitude 3. 53. South, freſh Gales
'and clear Weather——the Winds moſtly
'in the Eaſtern Quarter.

'From *Fernando de Norona* to the Lati-
'tude of 4 Degrees North, we had little
'Wind with much Rain.----The Mercury
'from 72 to 82.

'From 4 North to 30, freſh Gales and
'ſqually Weather, moſt Part clear.-----
'Mercury fell gradually from 82 to 69.

'From the Latitude of 30 N. to the
'*Downes*, we had nothing but ſtormy
'Weather, and the Thermometer fell daily
'from 69 to 45.

'In the Firſt Part of our Paſſage we had
'ſeveral Fluxes---none of which however
'proved fatal.---The Patients were generally
'feveriſh at the Beginning of the Attack,
'which rendered bleeding neceſſary.---After
'that they were puked, had an Anodyne at
'Night, and the next Day took a Doſe of
'Rhubarb with ſome Grains of Nutmeg:---

'When the Diſorder ran out to any length, 'I gave the Ipecacuan in ſmall Doſes, and 'interpoſed Opiates occaſionally.

'We had likewiſe ſome Inflammatory 'Complaints, which yielded to the common 'Methods of Relief.----

'The *Scurvy* alſo made its Appearance: '----Two Men were put on board us from 'the *Carcaſs*, who were ſcorbutic, and in 'one of them the Diſeaſe complicated with 'the *Lues Venerea*.----Two of our own 'People alſo, who had more or leſs of the 'Scurvy all Winter, got conſiderably well 'rid of their Complaints during the Spring, 'but now again were found affected.

'Having not as yet had any Opportunity 'of giving the *Wort* a fair Trial, (for tho' 'ſeveral People drank of it during the 'Winter for ſcorbutick Complaints, they 'uſed at the ſame Time the Wild Celery, 'and never took the *Wort* regularly) I now 'determined to make the Experiment with 'theſe four Patients, and accordingly put 'them

'them on the Courſe which is propoſed,
'in the Book formerly mentioned.----

'They all uſed the ſame Diet, viz.----In
'the Morning, Biſcuit boiled with *Wort*
'and Sugar:----For Dinner at ſometimes
'what could be ſpared from the Officers
'Table, at other Times Portable Soup
'thickened with Barley or Rice, and ſeaſon-
'ed with Shallots or Garlick: for Supper,
'Rice and Currants, Sago, or Salep, with
'Madeira.

'The *Wort* was made freſh every Day,
'in the Proportion of three Meaſures of
'boiling Water to one of the ground Malt;
'it was allowed to ſtand cloſe covered till
'cold, and then ſtrained.----

'Here follows a particular Detail of the
'Effects----and a circumſtantial Account of
'the State of each of the Patients.

'*William Larder*, aged 29, formerly of
'a good Habit of Body.---*Feb.* 1ſt, 1767,
'complains of great Laſſitude, that he finds
'himſelf fatigued by walking but a little
'while;

' while; his Face is pale and yellowiſh;
' his Mouth pretty clean, owing perhaps
' to the Elixir of Vitriol we daily put in our
' Water; his Gums are a little ſwelled and
' ſpungy; his Breath is very offenſive; his
' Legs ſwell, and pit when preſſed with the
' Fingers; they are covered with blue Spots,
' of different Sizes like Bruiſes, with two
' Ulcers, which diſcharge a thin bloody
' Ichor, and have a black mortified Appear-
' ance; his Legs are more ſwelled at Night
' than in the Morning; he is generally
' coſtive, his Appetite is good, and his Pulſe
' pretty regular.

' His Legs are ordered to be ſtuped with
' the common Fomentation, and the Ulcers
' dreſſed with the common Dreſſing.

' Gave him half a Pint of the *Wort* in
' the Morning, and half a Pint in the
' Evening.

' 3d, Gave him one Pint in the Morning,
' and half a Pint in the Evening.

' 7th,

'7th, Gave him a Pint Morning and
'Evening.

'8th, The *Wort* purged him laſt Night,
'but he took the ſame Quantity To-day
'without having any ſuch Effect.---Finds
'himſelf ſomething better.

'12th, Gave him a Pint in the Morning,
'another in the Middle of the Day, and a
'Third at Night.

'20th, He looks healthier, his Legs are
'not ſo much ſwelled, the Ulcers ſeem in-
'clinable to heal, having loſt that black
'bloody Appearance.

'Gave him a Quart of *Wort* in the Morn-
'ing, a Pint at Noon, and another at
'Night.

'28th, He finds himſelf greatly better,
'the Ulcers being almoſt healed, and the
'Swelling gone, except a little in the Even-
'ing; the Skin is peeling off his Legs.

'Gave

'Gave him a Quart in the Morning, one at 'Noon, and one at Night.

'*March* 6th, Has no Complaint, and 'returns to his Duty, but continues to drink 'the *Wort*, the Quantity of which is to be 'leſſened by Degrees, until he leaves it off 'entirely.'

'*John Carrol*, aged 35 Years, formerly 'healthy; brought a Pox with him from '*England*, which has eluded the Force of 'all the Medicines given him, owing per-'haps to the Man's own Negligence and 'Intemperance; joined to the Scorbutic 'Habit which he acquired during the 'Winter.

'He was very ill of the Scurvy during 'the Winter, but got better by drinking the '*Wort*, eating wild Celery, and uſing Ex-'erciſe on Shore, the Calves of his Legs 'were quite indurated, and black at that 'Time.

'*Feb.* 1ſt, He has now ſeveral Ulcers 'upon him, in his Legs and Arms, which

'are

‘ are very offenſive; a large hard Swelling
‘ on his Cheek; his Teſticles are ſwelled,
‘ hard, and quite inſenſible; his Gums are
‘ rotten, black, and bleed frequently; his
‘ Breath ſtinks horribly; he is quite ema-
‘ ciated, and ready to faint every Step he
‘ takes; he has no Appetite, is greatly de-
‘ jected, and his Pulſe very low.

‘ The Ulcers were dreſſed dry.

‘ Gave him half a Pint of the *Wort*, in
‘ the Morning, which immediately brought
‘ on a Looſeneſs with fainting; this however
‘ ſoon ſtopped, on his taking ſome Doſes of
‘ the Electarium e Scordio, diſſolved in Cin-
‘ namon Water, together with mulled
‘ Wine. Gave him twenty Drops of the
‘ Acid Elixir of Vitriol, along with his
‘ *Wort*; and three Times a Day, a Glaſs of
‘ the following bitter Wine.

℞. Cort. peruvian. craſſe pulv. Uncias duas,
———Limonum Seſcunciam,
Vini Madeirens: lib. duas. M.

'3d, He is better----gave him half a 'Pint of *Wort*, twice a Day.

'10th, He finds himſelf ſtronger, and not 'ſo liable to faint.----The Swelling on his 'Cheek looks red and inflamed. Applied 'a Poultice of Oatmeal with a little Oil.

'20th, Stronger,----has a better Appetite, 'Ulcers look better, the Tumour on his 'Cheek broke of itſelf, the Quantity of 'Matter but ſmall, blackiſh, and very of-'fenſive. Gave him a Pint of *Wort* twice 'a Day.

'*March* 1ſt, Continues mending.----His 'Cheek has degenerated into a foul looking 'Ulcer like the reſt.----Gave him three 'Pints of *Wort* in the Day.

'10th, Has almoſt quite recovered his 'Strength, and eats heartily.---The Ulcers 'begin to diſcharge a thicker Matter, and 'have not ſo bad an Appearance.

'16th, Continues to mend.---Gave him 'two Quarts of *Wort* in the Day.

'20th, Arrived in the *Downs*.----He is 'greatly mended in his Appearance, and 'Health in general.----Judged neceſſary to 'let him have the Benefit of the Air on 'Shore.'

'*William Rogers*, Marine, aged about '24, of a thin, weakly Habit of Body, has 'been ſickly all Winter.

'*Feb.* 1ſt, Complains of great Weakneſs, 'Pain, and ſwelling of his Knees, his Legs 'are drawn up ſo that he cannot ſtretch 'them without Pain, his Face is of a dark, 'yellowiſh Colour, he is quite emaciated, 'being ſcarce any thing but Skin and Bone, 'his Pulſe low and rather quick, he is ge-'nerally looſe.

'His Knees were fomented twice a Day 'with the common Fomentation, to which 'was added, an eighth Part of Vinegar, and 'rubbed with a camphorated Liniment.

' He likewiſe took the bitter Wine, and half
' a Pint of *Wort* twice a Day.

' 6th, Gave him half a Pint thrice a
' Day.

10th, Gave him a Pint twice a Day.

' 11th, The *Wort* purged him laſt Night,
' but ceaſed immediately on taking twenty
' Drops of Tinctura Thebaica in two
' Spoonfuls of Cinnamon Water.

12th, Gave him half a Pint three Times
' a Day.

' 18th, He is much better, can ſtretch out
' his Legs, and walk pretty well.---Gave
' him two Pints and a half in the Day.

' 26th, Continues mending.---Gave him
' a Pint three Times a Day.

' *March* 9th, Now finds himſelf pretty
' well, and is returned to his Duty, but ſtill
' continues

' continues to drink the *Wort*, in a ſmaller ' Quantity.'

' *William Waters*, aged 36, a ſtrong Man ' and formerly very healthy, was afflicted ' with Scorbutic Complaints all Winter.

' *Feb.* 1ſt, Complains of Weakneſs, fall- ' ing away in his Fleſh, and Ulcers in his ' Legs; dreſſed the Ulcers dry, and gave ' him three half Pints of the *Wort* in the ' Day.

' 6th, Gave him a Pint thrice a Day.

' 20th, Gave him two Quarts in the ' Day.

' 28th, Gave him three Quarts in the ' Day.

' *March* 10th, Ulcers healed up,——has ' no Complaint, and looks remarkably fat ' and fair.'

' RE-

REMARKS.

'A Looſeneſs ſeems to be the only Thing
'to be apprehended from the Uſe of the
'*Wort*; but this, it appears, may be avoided
'by giving a ſmall Quantity at firſt, and
'increaſing it gradually, as the Patient re-
'covers Strength; for it is obſervable, that
'the *Wort* opens the Belly more or leſs ac-
'cording as the Patient is more or leſs ad-
'vanced in the Diſeaſe---ſince half a Pint
'will have a greater Effect in that Way, if
'given in the laſt Stage of the Diſtemper,
'than four times that Quantity taken in the
'firſt:——A few looſe Stools, I obſerved
'always to be of Service, and when they ex-
'ceeded, they were eaſily checked by a
'proper Uſe of Opiates and Aſtringents.'

Theſe Caſes, if not altogether concluſive with reſpect to the Antiſcorbutic Virtue of the *Wort*, muſt at leaſt be admitted as a full Proof, that this Liquor may be taken in pretty large Doſes, without producing any ill Effect.----The following ones however I apprehend

apprehend will put the Matter beyond all Diſpute, and plainly ſhew that the *Scurvy* may be *eaſily* and *effectually* cured by the Means of this Subſtitute, and entirely *without* the Aid of *freſh Vegetable Diet*.

Dr. Hunter, who with great Humanity made Uſe of his Influence to have the *Wort* tried ſome Years ago when I firſt made the Propoſal,---has been ſo obliging as to tranſmit, within theſe few Days, the following Letter, written to me from *Bombay*, by Mr. *James Badenach*, Surgeon of the *Nottingham* Eaſt India Man.---It is dated *October* 16th, 1766,---and runs as follows.

'SIR,

'I hope you will excuſe the preſent free-
'dom of informing you, that having made
'a ſmall Trial of the *Wort* in the Cure of
'the Scurvy at Sea, on Board the *Notting-*
'*ham* Eaſt India Man, the Hon. *Thomas*
'*Howe* Commander; and according to
'your Requeſt in your Experimental Eſſays,
'having noted down, on the Spot, the Par-
'ticulars of each Caſe wherein I gave the

'*Wort*,

'*Wort*, I have wrote out ſix Caſes---being
'the greateſt Number that the ſmall Quan-
'tity of Malt I had on board allowed me
'to give it to.

'As the Diſcovery of the *Wort* appears
'to be a Matter of ſo much Conſequence
'to the ſeafaring Part of Mankind, what-
'ever has the ſmalleſt Tendency to promote
'its general Uſe ought not to be neglect-
'ed; upon this Account *Daniel Draper*
'Eſq; one of the Honourable the *Eaſt India*
'Company's Council at *Bombay*, has been
'ſo good as to tranſmit theſe ſix Caſes to
'Doctor *Hunter* at *London*, and along with
'them I ſend this Letter, which I hope you
'will receive.

'If theſe Caſes may excite others to try
'the *Wort*, I leave it to you to do whatever
'you think proper with them.----In the
'mean time I am, with Reſpect, &c.

'MEDI-

MEDICAL CASES,

Tending to prove the great Utility of freſh *Wort*, in the Cure of the Scurvy at Sea.

CASE FIRST.

'*Charles Wareham*, Seaman, aged about '22, naturally healthy, came home from '*India* in the *Pococke*, ſome time before he 'went on board the *Nottingham*.

'About the Beginning of *March* 1766, 'while the *Nottingham* lay at *Graveſend*, he 'was ſeized with a Catarrhal Fever, from 'which he did not entirely recover until 'we got into the warm Weather about the 'Middle of *April*, being by that time a 'Month at Sea;---from this Period, till 'the Middle of *May*, he continued doing 'Duty as an ordinary Seaman.

'About the 18th of *May* he complained 'of ſore Gums, fetid Breath, and had a 'Complexion deeply tinged with yellow.

'I gave him a lenient Decoction of Tamarinds and Cream of Tartar, together with a Gargle for his Mouth; but in ſpite of theſe, the Scorbutic Complaints increaſed faſt during the Remainder of *May*, and firſt Week of *June*, ſo as to render him unfit for Duty and confine him below.

'On the 8th of *June*, which was the firſt Day he took the *Wort*, he had the following Scorbutic Symptoms; his Gums were ſpungy, ſwelled, painful, of a livid colour, and bled on the leaſt Touch; his Breath was ſo fetid as to be offenſive both to himſelf and Meſſmates; he had an uneaſy Pain acroſs the Cheſt, with a Difficulty of breathing, which increaſed upon the leaſt Exerciſe; his Pulſe was harder, and a little quicker than natural; the Heat of his Body was rather below the healthy Standard; he was coſtive, and made high coloured Urine, with a greaſy Scum on the Surface; his Legs and Thighs were full of little pimply Eruptions

' tions and livid Spots; his Hams were ſtiff,
' and painful; the Knees a good deal ſwell-
' ed and painful, and his Legs always ſwelled
' towards Night, the Skin being dry: The
' Soreneſs of his Mouth prevented him from
' eating ſolid Food, ſo that he was often
' obliged to faſt, contrary to Inclination,
' which rendered him very weak and
' low.

' This Day, I gave him one Pint of the
' freſh made *Wort* boiled up with ſome
' pounded Sea Biſcuit into a Panado, and
' ſweetened this Meſs with Sugar, which
' was very agreeable and ſat eaſy; he drank
' another Pint acidulated with Elixir of Vi-
' triol, in the Courſe of the Day; thus he
' was provided with both Meat and Drink,
' and uſed nothing elſe.---The Grains from
' whence the *Wort* had been ſtrained off,
' were applied as a Poultice to the ſtiffened
' Hams, with the Addition of a little ſweet
' Oil.

' 9th *June*---Uſed the ſame Diet;---no
' Alteration.

' 10th---The catching of Breath (as he ' termed it) abated; ſweated a little in the ' Night. Uſed the *Wort* and *Panado* as ' before---to which I added a laxative ' Bolus.

' 11th----The Breathing ſtill better;--- ' the Hams not ſo painful;-----had three ' looſe Stools.---The Quantity of *Wort* in- ' creaſed to three Pints in the Day.

' 12th---Looſeneſs continues;---the Face ' more lively coloured; pain of the Breaſt ' vaniſhed; the Skin more moiſt, and the ' Pains of the Limbs much better.---Perſiſts ' in the ſame Courſe as before.

' 13th---In the Night he was a good deal ' griped, which was ſucceeded by an Increaſe ' of the Looſeneſs;---he continued to take ' the Panado, but was ordered to abſtain ' from drinking the *Wort*, for fear of in- ' creaſing the Purging too much.---He got ' a Decoction of the Bark, with Honey of

' Roſes

' Roſes and Elixir of Vitriol to waſh his
' Mouth with, by way of Gargle.

' 14th.---The Looſeneſs continued, but
' without griping, and all his Complaints
' were better: uſed three Pints of the
' *Wort*.

' 15th---All the Pains, both of Breaſt
' and Limbs, removed; Eruptions moſtly diſ-
' appeared; Mouth clean and Gums not ſo
' ſpungy; he walked about chearfully, and
' was moderately looſe.

' 16th.---So well that he thought himſelf
' able to go upon Deck to do Duty; but the
' Weather being rainy he got wet, and be-
' ſide, found that ſtrong Exerciſe hurt his
' Breaſt.---Uſed the *Wort* as before.

' 17th.---Did his Duty as a Seaman;---
' uſed the ſame as before.

' 18th.---As on the preceding Day.----
' The ſmall Quantity of Malt, that I had
' provided,

'provided, being now nearly exhauſted, I 'was obliged to ſtrike him off from the 'further Uſe of the *Wort*:---The Conſe-'quence was, that in a few Days the Symp-'toms returned, for which I had recourſe to 'the Remedies generally uſed at Sea, viz. 'laxative Boluſes and Decoctions, with 'the *Pil. Scillit.*:---I likewiſe tried Sugar 'diſſolved in four Times its Quantity of 'Water, and uſed much in the ſame Man-'ner, and in nearly the ſame Quantity as 'the *Wort*; but all theſe had little Effect, 'the Patient being confined below for near 'four Weeks, after the *Wort* was done--- 'and in nearly the ſame Condition as be-'fore he firſt began it.

'On the 16th of *July* we came to an An-'chor at the Iſland of *Joanna*, where this 'Patient, with about forty others, went on 'ſhore, lived in a Tent erected for the 'Purpoſe, and by the Uſe of freſh Fruits 'and Vegetable Soups recovered in five 'Days Time.

CASE

CASE SECOND.

'*John Hyett*, one of the Honourable
'Company's Recruits, 21 Years of Age, bred
'to the Sea.---About the 14th of *June* his
'Gums became ſpungy, and he complain-
'ed of a fixed Pain in the Small of his
'Back, with wandering Pains all over the
'Body. --Theſe Symptoms increaſed till the
'18th *June*, when his Gums were livid
'and ſwelled; the Breath fetid; the
'Thighs, Legs, and Hams in great Pain;
'the Shoulders and Limbs full of purple
'Eruptions and large Spots; he was coſ-
'tive, and made high-coloured Urine.

'This Day he began and took three
'Pints of the *Wort*, as in the foregoing
'Caſe.

'19th, I found the *Wort* had given him
'two looſe Stools without griping;---re-
'peated the ſame.

'20th.

'20th.---Every Way much better; in-
'creaſed the Quantity of *Wort* to two
'Quarts---One Half for Panado and the
'other for Drink.

'21ſt.---All the Pains gone;---the Belly
'continues open, the Mouth is cleaner and
'the Gums not ſo ſore;---his Colour is
'more lively, and he has gained Strength:
'repeated the ſame.

'22d.---Almoſt every Complaint vaniſh-
'ed, his Mouth and Gums ſo well that he
'could eat dry Biſcuit, and ſo much reco-
'vered in every reſpect that he went upon
'Deck.

'23d.----Continued ſtout.----From this
'Day till the 26th he remained upon Deck,
'ſtrong and chearful, but having no more
'*Wort* he relapſed; when I had recourſe
'to the uſual Remedies, but without Effect,
'for the Symptoms increaſed until we arriv-
'ed at *Joanna*, where he quite recovered in
'a few Days.

CASE THIRD.

'*Thomas Redhead*, a Recruit, 32 Years of 'Age, his Legs and Ankles ſwelled, and 'pitted when preſſed by the Fingers; the 'Skin of them dry, rough, and covered 'over with purple Spots, which alſo ex-'tended up the Thighs:---His Belly was 'greatly bound.---

'On the 17th *June*, he was purged with 'a Decoction of Tamarinds and Cream of 'Tartar.

'18th.---I gave him three Pints of *Wort*; 'one Half in Panado, the other in Drink.

'19th.---Continues open in his Belly;--- 'the Swelling of the Legs and Ankles con-'ſiderably abated;---repeated the *Wort*.

'20th.---Repeated as before.

'21ſt.---The Swelling gone, and the 'Spots diſappeared. From this Time he

' went upon Deck, and worked when re-
' quired, all the Way to *Joanna*.

CASE FOURTH.

' *James Vaughan*, a Recruit---19 Years
' of Age, tall, and naturally healthy.----
' About the 10th of *June* he began to loſe
' his Strength, complained of ſore Gums,
' and fetid Breath, grew of a ſallow Com-
' plexion, and ſtruck out on the Legs and
' Arms with purple Eruptions.

' Theſe Complaints daily increaſed, and
' were joined to others; ſo that on the 18th,
' antecedent to the Adminiſtration of the
' *Wort*, he had preciſely the following
' Symptoms.

' His Gums were greatly ſwelled, ſo as
almoſt to cover the Teeth, were of a
' livid Colour, looſe, ſpungy, and extreme-
' ly painful; his Breath very offenſive; the
' Breathing difficult, with a Pain of the
' Cheſt

'Cheſt which increaſed upon the leaſt Mo-
'tion; his Face bloated, ſwelled, and
'when nearly inſpected the Cheeks appear-
'ed of a purpliſh Hue; he had Pains in
'the Loins, and in all his Limbs, with in-
'numerable purple coloured Eruptions, and
'large Blotches upon the Extremities; his
'Pulſe was hard, ſmall, and quick; he
'made high coloured Urine, and was ex-
'tremely coſtive.

'On this Day he began the *Wort*, and
'took three Pints in the ſame Manner as
'before mentioned.

'19th.---Much the ſame---*Wort* ſat eaſy
'---repeated it.

'20th.---Had one looſe Stool---but no
'ſenſible Alteration, excepting that the Pain
'which uſed to be acroſs the Cheſt, was
'now ſhifted to the Side.---Increaſed the
'*Wort* to two Quarts, and ordered him to
'waſh his Legs in Vinegar.

'21ſt.---Has had two looſe Stools, and 'is much better in every Reſpect; the wan-'dering Pains perfectly eaſy; the Com-'plaints affecting the Breath abated; the 'Swelling and livid Hue of the Counte-'nance diſperſed.---Continued the *Wort* in 'the ſame Quantity as the Day before.

'22d.---The Mouth cleaner, and Gums 'growing firm; all the Pains vaniſhed, ex-'cept an Uneaſineſs in the left Hip.---Re-'peated the *Wort* as before.

'23d.---Sweated a good deal in the Night; '---gave him a laxative Bolus, and an aſtrin-'gent Gargle for his Mouth.

'24th.---Had a good many looſe Stools: '---The purple Eruptions and Blotches diſ-'perſed and gone,---the Complexion more 'lively coloured,---and no Pain or Uneaſi-'neſs of any Part.---Repeated the *Wort*, and 'gave him the Gargle made of the Decoc-'tion of Bark and Elixir of Vitriol.

'25th.---

'25th.---So well and ſtrong, that he 'judged himſelf able to go upon Deck and 'put his Hand to any thing he might be 'deſired:---Continued the *Wort*.----From 'this Time till the End of *June* he remain-'ed healthy---but he grew bad again before 'we reached the Iſland of *Joanna*, where he 'recovered along with the reſt.

CASE FIFTH.

'*Francis Turner*, a Recruit, had been long at 'Sea, but never Scorbutick before.---About 'the 25th of *May* he ſhewed me his left Leg, 'on the Calf of which were many Scars of 'old Sores, which were now grown of a 'livid Colour, and become painful, tenſe, 'and rigid;---his Gums being at the ſame 'Time rotten and ſpungy, left no Room 'to doubt but that he was falling into the 'Scurvy:---I made him drink Sea-water, 'gave him laxative Decoctions, and deſired 'him to uſe a Gargariſm, but all without 'any good Effect; for the Complaints daily 'increaſed,

'increaſed, until at length the old Cicatrices 'actually broke out, the Gums grew putrid, 'and bled on the leaſt Touch, the Calf of 'the left Leg became quite rigid, and both 'Hams ſtiff and painful; his Pulſe was ſmall 'and hardiſh, and he was ſo weak as 'ſcarcely to be able to walk a few Yards.

'The Malt being nearly all uſed, I firſt 'gave him a Decoction of *Sarſaparilla* for 'five Days---which had a viſible Effect 'upon his left Leg, for it became ſofter 'and better coloured.

'From the 19th of *June* to the 24th, 'he conſumed three Pints of the *Wort* dai-'ly---which kept him open in his Bowels, 'and in this ſhort Time removed the Stiff-'neſs and Lividity of the Leg and Hams--- 'the Ulcers healed up, the Gums became 'clean and ſound, and he grew in every 'other Reſpect ſo well that he went upon 'Deck, and remained healthy all the Re-'mainder of the Paſſage.

CASE

CASE SIXTH.

'*John Harlington*, a Recruit, 37 Years of 'Age, of the middle Stature, and formerly 'of a healthy Conſtitution.----About the '25th of *May* his Gums were ſpungy, pale-'coloured and ſore, his Breath offenſive, 'both Hams ſtiff, and he complained of 'wandering Pains through all his Limbs.

'Theſe Complaints increaſed till the 8th 'of *June*, when he had moreover a fixed 'Pain in the Loins, a Swelling of both 'Knees, with ſeveral Bumps or Tumors, 'ſome of which were of a bluiſh Colour, 'on the inſide of the *Tibia*; he was ex-'tremely coſtive, and ſo emaciated that he 'could hardly crawl out of his Ham-'mock.

'This Day I gave him a Quart of the '*Wort* in the ſame Manner as to the 'others.

'9th.---

'9th.---Repeated the ſame.---No Alter-
'ation.

'10th.---Continued the like Quantity---
'no Change.

'11th.---The *Wort* had opened him a
'little;---all the Complaints better:---In-
'creaſed it to three Pints.

'12th.---Colour more lively, and all the
'Pains eaſier.---Continued the *Wort*, and
'gave him an antiſeptic Gargle for the
'Mouth, together with camphorated Spirits
'to rub on the Swellings of the Tibia.

13th.---In the Night he became looſe,
'which continued;------all the ſcorbutic
'Symptoms better--repeated the Medicines
'as Yeſterday.

'14th.---Better---repeated the ſame.

'15th.---Still continues looſe---and pretty
'eaſy; goes on as uſual.

'16th.---

' 16th.---Much the ſame as before---uſed
' the ſame Things.

' 17th.---Looſeneſs continues;---all Com-
' plaints eaſy excepting the Pain in the
' Back;---repeated the *Wort*.

' 18th.----Much at one----repeated the
' ſame.

' 19th.---Had ſweated a little----repeated
' the *Wort* to two Quarts, which was the
' laſt he got of it.

' As he had nothing all this while to
' ſubſiſt on but the *Wort*, he did not reco-
' ver Strength ſufficiently to enable him to
' keep upon Deck---ſo that after a few Days,
' the Malt being all expended, he was moſt-
' ly confined to his Hammock until we ar-
' rived at the Iſland of *Mohila*: And altho'
' at that Iſland, and for five Days more
' that we were at Sea between it and *Joanna*,
' he had Plenty of Limes, Oranges, and

'other Fruits, yet for want of freſh Meat, 'he and the reſt of the Scorbutics were but 'very little better when they were landed 'at this laſt mentioned Iſland, the 16th '*July*; where, as has been already ſaid, they 'all recovered in five Days.'

REMARKS.

'Theſe ſix Caſes were all that the ſmall 'Quantity of Malt I had on Board allowed 'me to give the *Wort* to; and of how 'great Service the uſe of it was to thoſe 'who took it, I leave to the Judgment of 'any Perſon who has ſeen the Scurvy at 'Sea, and knows that all other Medicines 'hitherto tried are of little or no Effect.

'Whatever Alteration was made in the 'Habit of theſe Scorbutics, was entirely 'owing to the *Wort* and the Panado made 'of it; for we have not ſuch a Variety of 'Diet and Proviſions as they have in the 'Royal Navy, (where they are provided 'with portable Soup, Sago, Rice, Barley,

' &c.) and in the preſent Trial I believe the
' Patients taſted nothing beſide during the
' Courſe; for on account of the Soreneſs of
' the Mouth, they could not eat any thing
' ſolid.

' It appears probable from this ſmall Tri-
' al, that the uſe of *Wort* will in three or
' four Days abate the Scorbutic Pains, ex-
' cite a Looſeneſs, and diſperſe the Erup-
' tions:---That in ten Days, or ſo, the *Wort*,
' in moſt Caſes, if taken in Time and to a
' ſufficient Quantity, will recover the ſcor-
' butic Patient ſo far as to be able to go
' upon Deck fit for moderate Duty;---
' That if continued, in ſmaller Quantity,
' after Recovery from the Diſeaſe, it will
' prevent their relapſing for Months, with-
' out any other Remedy; which nothing
' that has yet been carried to Sea has ever
' done:---That if aided by portable Soup,
' Rice, Sago, freſh Meat Broths, and the
' like, there will be little Danger of this
' Diſeaſe even in the longeſt Cruiſes.

'The Malt that I uſed, was got from a 'Maltſter at *Graveſend*; it was kept in a 'Bag in the Gun-room, and remained freſh 'until I wanted to uſe it, which was about 'three Months.

'It was managed according to the Di-'rections in the Propoſal;---being ground 'daily in a Hand-mill, according as it was 'required.

'*Three* Meaſures of boiling Water were 'poured on *One* of the ground Malt, which 'was put into a large Copper Decoction-'pot; and there left to ſtand for four 'Hours, when it was ſtrained off through a 'Cloth, and each of the Patients ſerved with 'their Allowance of it.---The *Wort* was of a 'pale Colour, ſweetiſh and very agreeable: 'a Glaſs full of it, in a Heat of 74 Degrees 'of *Fahrenheit*'s Thermometer, kept for 24 'Hours, perfectly ſweet and freſh---but in 36 'Hours became vapid, ſouriſh, and threw 'up a Scum to the Surface.---When the

'Malt

'Malt was boiled, it made a *Wort* not ſo 'light and good, being high coloured, 'clammy, and did not run into Fermenta-'tion ſo ſoon as that made by ſimple infu-'ſion, by ſix or eight Hours.

'When the Sick become numerous, the 'Water, to maſh the ground Malt, may 'be boiled after Dinner in the Ship's Cop-'per; and a ſmall wooden Vat may be 'placed in the Galley for the purpoſe of 'brewing; the Infuſion may be ſtrained 'thro' a Piece of Hair-cloth, and received 'into a clean wooden Veſſel, where it will 'keep ſweet for about 30 Hours.

'Whether Malt will keep during the 'whole time of an *Eaſt India* Voyage is a 'Query;† but it might be made at ſeveral 'of the Company's Settlements, in *India*, 'where there is no Want of good Barley to 'make it of.

† It will——The Malt which was carried out in the *Jaſon*, was perfectly ſound after an Abſence of 18 Months.

'Whether this Remedy deſerves to be 'placed as the firſt Antiſcorbutic, muſt be 'left to the further Trial and Experience 'of others; although, if it anſwers as well 'as I have ſeen it, few, if any, will deny 'it.'

* * * * * *

In order to enable the Reader to form a Judgment of the Virtues of *Wort*, as compared with the other things that have uſually been recommended as Antiſcorbutics, I ſhall here add an Extract from Dr. *Lind*'s Treatiſe on the *Scurvy*, page 191, where he gives an Account of the Reſult of ſome Experiments which he made.

'On the 20th *May* 1747, I took twelve 'Patients, in the Scurvy, on board the '*Saliſbury* at Sea.---Their Caſes were as 'ſimilar as I could have them. They all 'in general had putrid Gums, the Spots and 'Laſſitude, with Weakneſs of their Knees. '---They lay together in one Place, being a 'proper Apartment for the Sick in the Fore-'hold; and had one Diet common to all,

'viz.

‘ viz. Water-gruel ſweetened with Sugar in
‘ the Morning; freſh Mutton-broth often-
‘ times for Dinner; at other Times, Pud-
‘ dings, boiled Biſcuit with Sugar, &c. and
‘ for Supper, Barley and Raiſins, Rice and
‘ Currants, Sago and Wine, or the like.---
‘ Two of theſe were ordered each a Quart
‘ of *Cyder* a Day.--Two others took twenty-
‘ five Drops of *Elixir* of *Vitriol* three times
‘ a Day, upon an empty Stomach; uſing a
‘ Gargle ſtrongly acidulated with it for their
‘ Mouths.---Two others took two Spoonfuls
‘ of *Vinegar* three times a Day, upon an
‘ empty Stomach; having their Gruels and
‘ their other Food well acidulated with it,
‘ as alſo the Gargle for their Mouth.---Two
‘ of the worſt Patients, with the Tendons in
‘ the Ham rigid, (a Symptom none of the
‘ reſt had) were put under a Courſe of *Sea*
‘ *Water*; of this they drank half a Pint
‘ every Day, and ſometimes more, or leſs
‘ as it operated by way of Phyſic.---Two
‘ others had each two *Oranges* and one
‘ *Lemon* given them every Day: Theſe they
‘ eat with Greedineſs, at different times, up-
‘ on an empty Stomach. They continued

'but ſix Days under this Courſe, having con-
'ſumed the Quantity that could be ſpared.
'The two remaining Patients took the Big-
'neſs of a Nutmeg three times a Day of an
'Electuary recommended by an Hoſpital
'Surgeon, made of *Garlic*, *Muſtard-ſeed*,
'*Horſeraddiſh* Root, *Balſam of Peru*, and
'*Gum Myrrh*; uſing for common Drink,
'Barley Water well acidulated with *Ta-*
'*marinds*; by a Decoction of which, with
'the Addition of *Cream of Tartar*, they
'were gently purged three or four Times
'during the Courſe.

'The Conſequence was, that the moſt
'ſudden and good Effects were perceived
'from the Uſe of the *Oranges* and *Lemons*;
'one of thoſe who had taken them, being
'at the End of ſix Days fit for Duty. The
'Spots indeed were not at that Time quite
'off his Body, nor his Gums ſound; but
'without any other Medicine than a Gar-
'gariſm with Elixir of Vitriol, he became
'quite healthy before we came into *Ply-*
'*mouth*, which was on the 16th of *June*.
'The other was the beſt recovered of any

'in

' in his Condition; and being now deemed
' pretty well, was appointed to nurſe the reſt
' of the Sick.

' Next to the Oranges I thought the *Cy-*
' *der* † had the beſt Effects. It was not
' indeed

† ' Extract of a Letter from Mr. *Ives*, (to Dr. *Lind.*)

——" I judge it proper to communicate to you what
" good Effects I have obſerved in the Scurvy from the uſe
" of *Cyder* and *Sea Water*, during the laſt Cruiſe I made
" in the Weſtern Squadron with my honoured Benefactor
" Admiral *Martin*. But as I do not pretend to have taken
" Notice of any thing more than merely a palliative Be-
" nefit from them, I think, without mentioning particular
" Caſes, it will be ſufficient for me to inform you, that in
" our preceding Cruiſe with the Weſtern Squadron, his
" Majeſty's Ship *Yarmouth*, of 70 Guns, and 500 Men,
" was not only troubled with the Scurvy in common with
" other Ships, but in ſpite of all my Endeavours, loſt in
" it a proportioned Number of Men.—Upon our Return
" from that Cruiſe, I took an Opportunity to repreſent to
" the Admiral, that as Vegetable Juices of all Sorts were
" from Experience found to be the only true Antiſcor-
" butics, and I had myſelf formerly experienced the
" good Effects of Apples, it was reaſonable to preſume
" that Cyder muſt certainly be of Service.—This Sug-
" geſtion agreed with ſome Accounts the Admiral had re-
" ceived from others; and he with great Readineſs bought
" and put under my Care, ſeveral Hogſheads of the beſt

" *Southham*

' indeed very ſound, being inclinable to be
' aigre or pricked; however thoſe who had
' taken it, were in a fairer Way of Recovery,
' than the others at the End of the Fortnight,
' which was the Length of Time all theſe
' different Courſes were continued, except
' the Oranges:---The Putrefaction of their
' Gums, but eſpecially their Laſſitude and
' Weakneſs, were ſomewhat abated, and
' their Appetite increaſed by it.

' As

" *Southham* Cyder. During the next Cruiſe, each Scor-
" butic Patient had daily a Quart or three Pints of Cyder;
" and as many as I could prevail on, took twice a Week
" three Quarters of a Pint of *Sea Water* in a Morning.—In
" all other Reſpects, I treated them as I uſed to do People
" in the Scurvy; which you well know, from the Conver-
" ſation which has often paſſed betwixt us on this Subject,
" was with Squill Vomits, Pills compoſed of Soap, Squills,
" Garlic, &c. Elixir of Vitriol, and other Medicines ſuited
" to the different Stages and Symptoms of the Malady.—In
" one Word, we had this Cruiſe as many Scorbutic Patients
" as any other Ship, in proportion to our Complement of
" Men. But although all the Reſt buried a great many,
" ſome to the Number of 20, others 30, 40, 50, and up-
" wards; yet the *Yarmouth* did not bury more than two
" or three, and theſe at the latter End of the Cruiſe, all
" our Cyder having been expended for a Week or ten Days
" before.—Upon our Arrival in Port, we ſent to the Hoſ-
" pital, a great many in very dreadful Circumſtances."

' As to the *Elixir of Vitriol*, I obſerved ' that the Mouths of thoſe who uſed it ' by way of Gargariſm were in a much ' cleaner and better Condition than many ' of the Reſt, eſpecially thoſe who uſed the ' Vinegar, but perceived otherwiſe no good ' Effects from its internal Uſe upon the other ' Symptoms.

' There was no remarkable Alteration ' upon thoſe who took the *Electuary* and ' *Tamarind Decoction*, the *Sea Water*, or ' *Vinegar*, upon comparing their Condition ' at the End of the Fortnight, with others ' who had taken nothing but a little *Leni-* ' *tive Electuary* and *Cream* of *Tartar*, at ' Times in order to keep their Belly open, ' or a gentle Pectoral in the Evening for re- ' lief of their Breaſt.---Only one of them, ' while taking the Vinegar, fell into a gentle ' Flux at the End of ten Days. This I at- ' tributed to the Genius and Courſe of the ' Diſeaſe rather than to the Uſe of the Me- ' dicine.---As I ſhall have Occaſion elſe- ' where to take Notice of the Effects of ' other Medicines in this Diſeaſe, I ſhall

' here

'here only obſerve, that the Reſult of all 'my Experiments was, that *Oranges* and '*Lemons*, were the moſt effectual Remedies 'for this Diſtemper at Sea. I am apt to 'think Oranges preferable to Lemons, tho' 'perhaps both given together will be found 'moſt ſerviceable.'

On comparing Dr. *Lind*'s Experiments with thoſe made by Mr. *Badenach*, we plainly ſee, that *Infuſion of Malt*, is, to the full, as powerful with reſpect to Antiſcorbutic Virtue, and as quick in its Operation as the *Freſh Juices* of the *Acid Fruits*; but as the Material for making this Liquor may be ſo cheaply purchaſed, and is capable of being much longer preſerved than Oranges, Lemons, or indeed any other Kind of Fruit, there can be no Heſitation in giving it the Preference for general Uſe.

The Methods of brewing, as well as adminiſtring the *Wort*, are ſo plainly ſet forth, by both Mr. *Young* and Mr. *Badenach*, that it would be ſuperfluous to add any thing further.---All the Precaution that ſeems neceſſary

ceſſary with reſpect to the Adminiſtration is to begin with a ſmall Quantity and increaſe gradually as it is found to agree.---- When the *Wort* purges too much, abſtain, or leſſen the Doſe;---or add as much of the Elixir of Vitriol as will make the Drink gratefully ſour:---if it gripes ſo much as to create Diſtreſs---give from fifteen to twenty Drops of Liquid Laudanum in two Spoonfuls of Cinnamon Water at Bed-time.

I obſerve that neither of the Gentlemen mixed Currants or Raiſins with the Panado, as I originally propoſed: theſe Fruits I ſhould think would not only make the Meſs more grateful, but alſo render it more efficacious; therefore, where theſe are at hand I would recommend them to be added, in any future Trial; for more Trials we certainly ſhall have, now that the Ice is fairly broken, and that People may ſee there is neither much Expence, Trouble, nor Hazard attending this Practice. On this Preſumption, I here again repeat my Requeſt, that ſuch Gentlemen as may hereafter try the *Wort*, will, previous to its Adminiſtra-

tion,

tion, carefully and particularly note down the Cases in which it is given, describing with Accuracy the several Symptoms, and relating, fairly, the Progress, and Effects from Day to Day; and let these Observations be communicated, either to the Public at once, or to the Author at *Dublin*.

August 6th, 1767.

FINIS.